REMARKS

Claims 1-10 are pending in this application. By this Response, claims 1, 4, 9 and 10 are amended. Reconsideration and allowance based upon the above amendments and following remarks are respectfully requested.

Applicant notes that independent claims 1, 9 and 10 have been amended to clarify the processing and storing of data with regard to the capturing of the next image frame to further clarify the distinction between the claimed invention and cited references (Yamaguchi & Sekine).

PRIOR ART REJECTION

The Office Action rejects claims 1-10 under 35 U.S.C. §103(a) as being unpatentable over Sekine, et al. (U.S. Patent No. 6,476,869) and Yamaguchi, et al. (U.S. Patent No. 5,818,527). This rejection is respectfully traversed.

Claimed Features Not Taught

In the Office Action it is alleged that Sekine teaches each of the claimed features of independent claims 1, 9 and 10 except for the features of a digital image shading device that corrects characteristic aberrations of a lens before the shooting of a next frame of an image or during the shooting of the next frame onward. The Office Action alleges that Yamaguchi makes up for this

deficiency in Sekine and that the combination of Yamaguchi and Sekine provide applicant's invention. Applicant respectfully disagrees.

Sekine teaches a video camera device that obtains aberration information about the video signal and apparatus and provides a code representative of the aberration to a video tape which stores the video signal. A separate system, as illustrated in Fig. 2, reproduces the aberration and video signal from the video tape and corrects the aberration. See column 3, lines 15-30 and column 2, lines 1-13. Thus, as correctly stated in the Office Action, Sekine does not teach correcting the video signal before or during the next shooting of a next frame of an image.

Further, Yamaguchi fails to make up for Sekine's deficiencies. Yamaguchi teaches a video image device that captures and corrects video signals. The image is captured by the CCD 2, supplied to an A-D conversion circuit 4, then stored in memory 5. It is only after storing the image in memory 5 that the image is corrected. After storing is completed, the read control circuit 12A obtains data from a ROM 13B for correcting the video signal. The corrected image is then supplied to an interpolation circuit 6. See column 9, lines 40-55.

Applicant notes that claims 1, 9 and 10 have been amended to now recite, a process of correcting a deterioration of an image quality derived from said image forming lens upon the entire

digital image data, to obtain processed image data, before the shooting of a next frame of an image, in which image data is stored in said image memory prior to shooting the next frame, or during the shooting of the next frame onward, in which the processed image data is stored in said image memory during or after shooting of the next frame.

The claims, as recited above, more clearly define the image data is processed then stored in an image memory prior to capturing the next image or in an alternative mode, the image data is processed while at the same time the image shooting device is capturing another image and the processed image data is either stored in the image memory during the capturing of the image or directly thereafter. Yamaguchi teaches contrary to the claimed features by storing the image data prior to being processed and further by not teaching alternative modes as recited in the claims for processing data.

The Office Action alleges that column 1, lines 50-67 and column 6, lines 11-16 teach the correcting of the image signal before or during the next image frame. Applicant respectfully submits that column 1 teaches the acquiring, converting and storing of the video signal, not the correction thereof. Also, column 6 merely teaches that the correction is performed within the image processor 30B. The image processor comprises the entire image capture and display device. See Fig. 8. These two (2) sections do

not teach the claimed correction techniques of the present invention.

The Office Action infers that Yamaguchi teaches correcting the video signal prior to or during the next image frame based on the fact that the image is corrected within the image processor 30B. As stated above, the image processor comprises the entire circuitry of the image device, as illustrated by Fig. 8. Further, the description on column 9, lines 40-55 clearly state that the correction is performed in the read control circuit 12A after storage of the video signal in memory 5. Thus, Yamaguchi does not teach the features of independent claims 1, 9 and 10 detailed above.

No Motivation

Further, one of ordinary skill in the art would not be motivated to combine the teachings of Sekine and Yamaguchi. Sekine teaches two separate systems, an image capture system and a system for correcting the image signal. Sekine's system is specifically developed into two separate systems in order to keep the image device as small as possible.

In contrast, Yamaguchi teaches an image device, which includes a correction means within the image capture device. One of ordinary skill would not look to include an image processor

according to Yamaguchi in the image device of Sekine which is designed to be separate from an image correction system.

Further, no motivation is provided within the references themselves or by one of ordinary skill to make such a combination. In fact, the Office Action's motivation states that motivation is provided because it would provide in Sekine "means to provide a process of image correction that is capable of producing central portions of images at high quality and entire marginal portions of images while realizing a correction circuit that is simple, small, and low cost". Sekine already provides a correction device thus adding a second correction device within the image capture device would be unnecessary. Also, adding features would increase the size of Sekine's image capture device and not make it smaller or cheaper.

Dependent Claim 4

Also, claim 4 recites, *inter alia*, the digital image data of the frame which is performed, and the correction by the lens characteristic correction unit are stored in said image memory. The Office Action states that Sekine discloses in column 6, lines 13-18 that the digital image data (color video output) of the frame corrected by the lens characteristic correction unit (Fig. 2) is stored in the image memory (video tape). However, the corrected image data in Sekine is recorded in the recording circuit 82

together with the image shake information, the lens characteristic information is not stored. In other words, Sekine suggests in column 6, lines 13-18 and in Fig. 5 correcting the image shake, but not correcting a deterioration of an image quality derived from the lens characteristic of the image forming lens. Thus, in Sekine, the image data together with the lens characteristic data are not stored in the memory.

Further, Yamaguchi suggest that the image memory 5 is connected downstream from the A-D conversion circuit 4 as shown in Fig. 8. Thus, Yamaguchi merely discloses storing the A-D converted image data before correction. Moreover, the image memory 5 does not store the lens characteristic data, either. The lens characteristic data is stored in the correction ROM 13B. Accordingly, Yamaguchi does not teach storing the corrected image data and the lens characteristic in the same image memory. As stated above, the correction, in Yamaguchi, is performed in the read control circuit 12A after storage of the video signal in memory 5. The corrected data and the lens characteristic data is not stored in memory 5.

Thus, both Sekine and Yamaguchi fail to teach the features of claim 4. Therefore, the combination of the two references do not teach the correcting the image signal (i.e, correcting a deterioration of the image quality derived from the lens characteristic of the image forming lens) before the shooting of a

next frame of an image or during shooting of the next frame, as well as storing the corrected image data and the lens characteristic data in the same image memory, as in the present invention.

CONCLUSION

Therefore, in view of the above amendments and remarks, applicant respectfully submits that the combination of Sekine and Yamaguchi's teachings fail to teach each and every feature of the claimed invention as required. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Chad J. Billings (Reg. No. 48,917) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By _____
Michael K. Mutter, #29,680

P.O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000

MKM/CJB/csm
1110-0240P